marathon®

Severe Duty Motors

Model No: 254TTFCD6590
Catalog No: E477A

Severe Duty Motor, 7.50 HP, 3 Ph, 60 Hz, 230/460 V, 1200 RPM, 254T Frame, TEFC

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Product Information Packet: Model No: 254TTFCD6590, Catalog No: E477A Severe Duty Motor, 7.50 HP, 3 Ph, 60 Hz, 230/460 V, 1200 RPM, 254T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**7.50 Hp**
Output KW	**5.6 kW**	Voltage	**230/460 V**
Speed	**1182 r/min**	Synchronous RPM	**1200 r/min**
Service Factor	**1.15**	Frame	**254T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**91 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**19.8/9.9 A**
Power Factor	**78.5**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**H**	Drive End Bearing Size	**6309**
Opp Drive End Bearing Size	**6209**	UL	**Listed**
CSA	**Y**	CE	**Y**
IP Code	**55**	Number of Speeds	**1**
Hazardous Location	**DIVISION 2 T2B**		

Technical Specifications

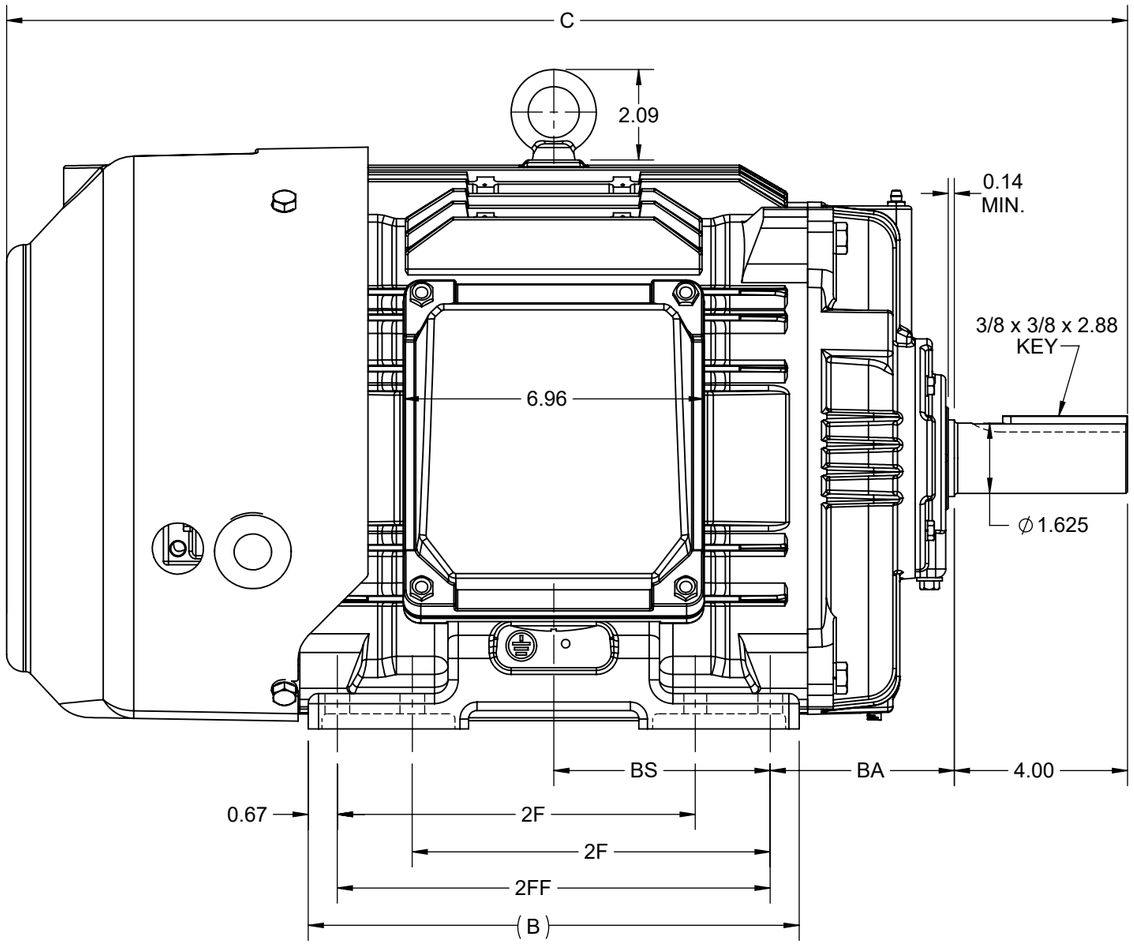
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**6**	Rotation	**Reversible**
Resistance Main	**1.366 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Shaft Diameter	**1.625 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 10:1/Variable 10:1**

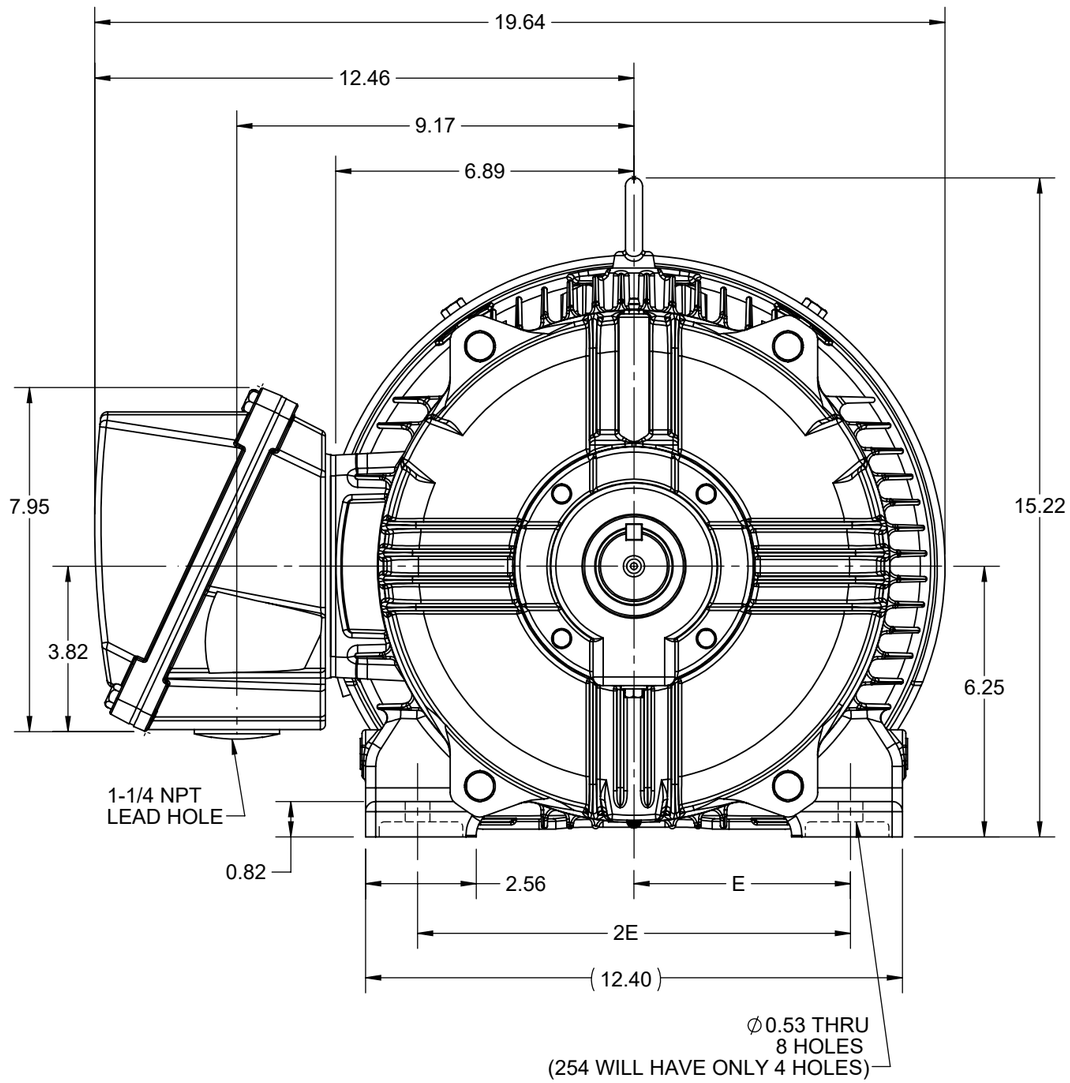
Drawings

Connection Drawing	**EE7308**	Outline Drawing	**SS208560-100**

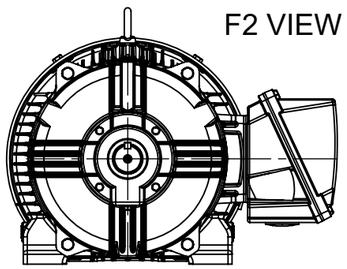
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DASH NO.	B	C	E	2E	2F	2FF	BA	BS	MOUNTING	FRAME
100	9.60	24.15	5.00	10.00	-	8.25	4.25	4.13	F1 OR F2	254T
200	11.34	25.89			8.25	10.00		5.00		254/256T





F2 VIEW



DRAWING REVISION F	REVISION BY SB	REV DATE/© DATE 07/23/2025
REQUEST NUMBER CR-0023556	APPROVED BY SBD	DATE 07/23/2025
REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED		

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PRIMARY DIMENSIONS ARE INCH
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ARE FOR REFERENCE ONLY

DRAWN BY BISWA	marathon™	
DATE 26/09/2018	DESCRIPTION: OUTLINE 254T/256T FR-NEMA-SD & IEEE841	
APPROVED BY SBD		
DATE 26/09/2018		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER SS208560	SHEET 1 OF 1

Uncontrolled Copy

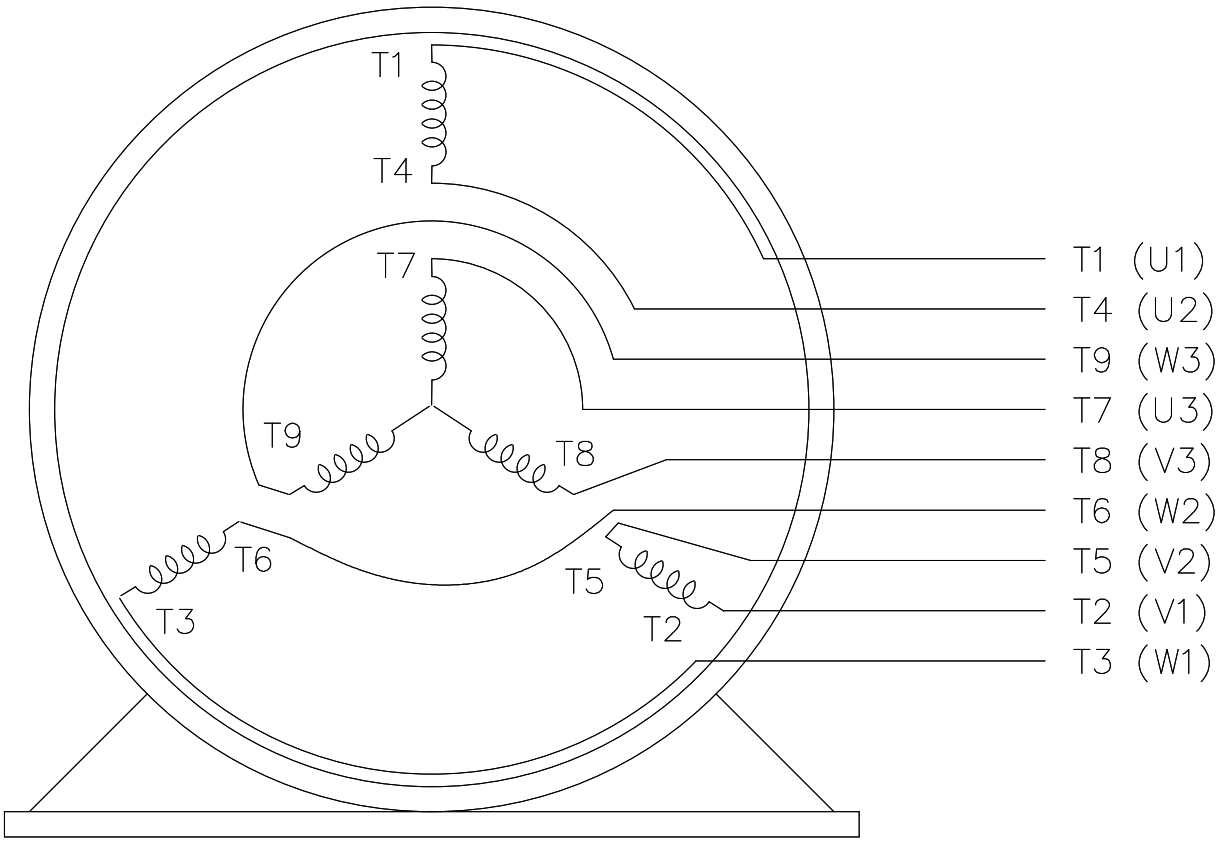
THREE PHASE
DUAL VOLTAGE MOTOR

HIGH VOLTAGE

(U1) T1 — L1
(V1) T2 — L2
(W1) T3 — L3
(U2) T4
(U3) T7
(V2) T5
(V3) T8
(W2) T6
(W3) T9

LOW VOLTAGE

(U1) T1
(U3) T7 — L1
(V1) T2
(V3) T8 — L2
(W1) T3
(W3) T9 — L3
(U2) T4
(V2) T5
(W2) T6



VIEW OF TERMINAL END

REF.
WINDING DIAGRAM

T8Y, T2Y, T2BL, T4BX, T2EC, T2G
T6BZ, T2B, T6BL, T4AV, T6B, T4B

OPTIONAL CORD CONNECTION

L1 — WHITE
L2 — RED
L3 — BLACK

DRAWING REVISION	REVISION BY	REV DATE/ © DATE
J	SB	08/01/2025
REQUEST NUMBER	APPROVED BY	DATE
CR-0023654	SBD	08/01/2025

REQUEST NUMBER DESCRIPTION
DRAWING TITLE BLOCK UPDATED

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DRAWN BY	RM
DATE	11/20/1990
APPROVED BY	SAS
DATE	04/24/2003
REFERENCE	
THIRD ANGLE PROJECTION	

marathon™

DESCRIPTION
CONN DIAGRAM-EXTERNAL
3Ø - DUAL VOLTAGE MOTOR

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	4 of 6 EE7308	1 OF 1

Data Sheet

Date: 5/6/2020
Customer:
Attention:
Submitted by:

marathon® Motors

254TTFCD6590

Submittal

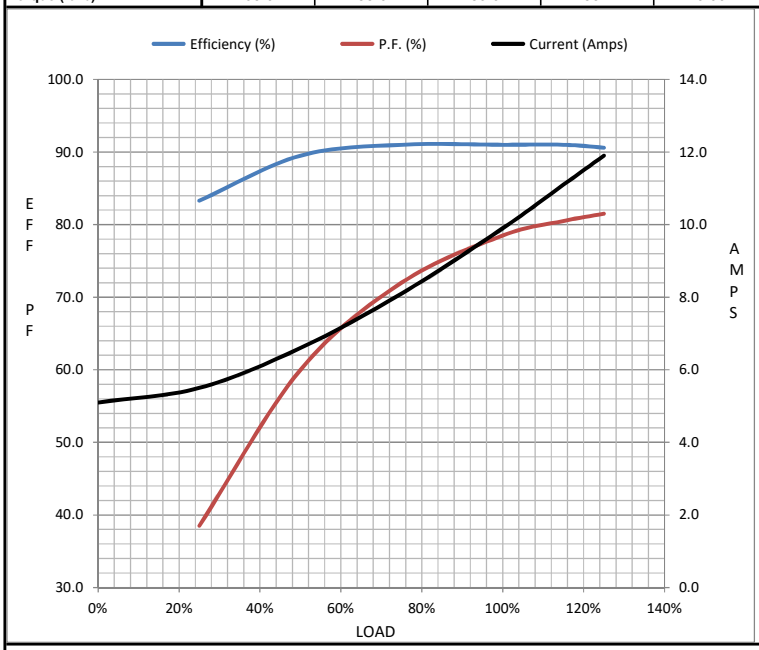
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	5.1	5.5	6.6	8.1	9.9	11.1	11.9	60.0	
Torque (ft-lb)	0.00	8.3	16.5	25.0	33.4	38.5	41.9	65.0	
RPM	1200	1195	1190	1185	1182	1,178	1175	0	
Efficiency (%)		83.3	89.5	91.0	91.0	91.0	90.6		
P.F. (%)	6.5	38.5	60.0	72.0	78.5	80.5	81.5	42.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1090	1182	1200
Current (Amps)	60.0	53.0	36.0	9.9	5.1
Torque (ft-lb)	65.0	55.0	89.0	33.4	0.00



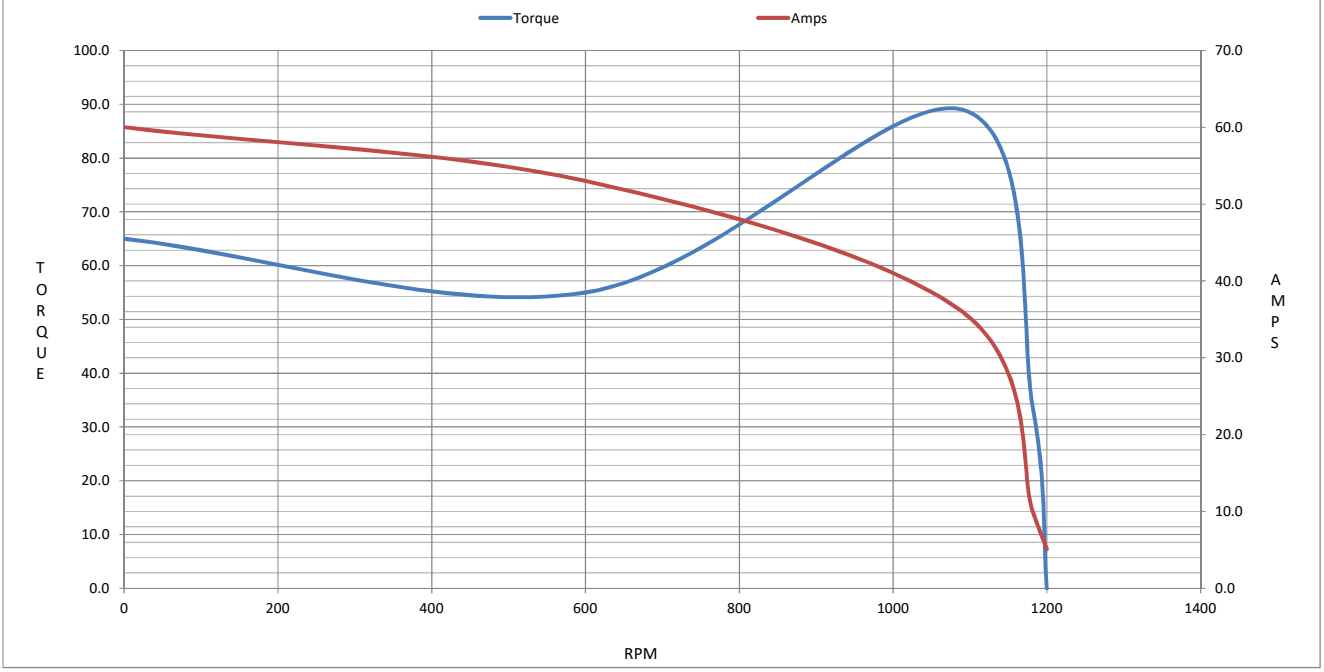
Information Block

HP	7.5	
Sync. RPM	1200	
Frame	254	
Enclosure	TEFC	
Construction	TFC	
Voltage	230/460	V
Frequency	60	Hz
Design	B	
LR Code letter	H	
Service Factor	1.15	
Temp Rise @ FL	40	° C
Duty	CONT	
Ambient	40	° C
Elevation	3,300	feet
Rotor/Shaft wk²	2.30	Lb-Ft²
Ref Wdg	HA31606007 NONE	
Sound Pressure @ 1M	56	dBA
VFD Rating	CONSTANT 10:1/VARIABLE 10:1	
Outline Dwg	SS208560-254T	
Conn. Diag	EE7308	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.8390	0.4650	2.3700	3.0810	51.1060

Speed -Torque Curve



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marathon® Motors

DATA VOLTS: 460

CERTIFICATION DATA SHEET

REFERENCE MODEL #: 254TTFCD6590
CONN. DIAGRAM: EE7308 **CAT #:** E477A
OUTLINE: SS208560-254T
WINDING: HA31606007 NONE 5 **MOUNTING:** F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
7.5	5.6	1200	1182	254T	TEFC	TFC	H	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV. (Ft)
3	60	230/460	19.8/9.9	LINE OR INVERTER	CONT	H	1.15	40	3300

F.L. EFF	91.0	3/4 LD EFF	91.0	1/2 LD EFF	89.5	GTD EFF	ELECT. TYPE
F.L. PF	78.5	3/4 LD PF	72.0	1/2 LD PF	60.0	90.2	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)	
33.4 LB-FT	60.0	65.0 LB-FT 195%	89.0 LB-FT 266%	40	

SOUND PRESSURE	SOUND	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX.
56 dBA	65 dBA	2.30 LB-FT²	150 LB-FT²	20 SEC.	2	299 LB.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	DIVISION 2 T2B	NO	NONE	BLUE (EPOXY)

BEARINGS DE	BEARINGS ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL	BALL	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6309	6209						

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
NONE	NOT	NONE	NONE	NONE	FALSE	NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
0.839	0.465	2.37	3.081	51.106	0.080	ODE

NOTES
*
*

If Inverter equals NONE, contact factory for further information
INVERTER TORQUE: CONSTANT 10:1/VARIABLE 10:1
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE
NONE NONE **PPR**

BRAKE: NONE
NONE NONE
FT-LB: NA
VOLTAGE: NONE **HZ:**

PREPARED BY:
DATE: 5/13/2020

FORM: 3531 REV_4 2/27/06
** Subject to change without notice.